

WHAT IS CLAIMED IS:

1. A method comprising dispensing drops from a pulse jet and striking the pulse jet at least once.
2. A method according to claim 1 wherein the pulse jet is struck intermittently multiple times.
3. The method of claim 2 wherein the pulse jet includes a housing enclosing a chamber and having a discharge opening for drops, and wherein the housing is struck on an outside surface with a member.
4. The method according to claim 3 wherein the housing is struck in a same direction in which drops are ejected from the pulse jet.
5. The method of claim 3 wherein the chamber is struck at a rate of 0.2 to 10 strikes/second.
6. The method of claim 3 wherein the chamber is struck at a rate of 1 to 5 strikes/second.
7. The method according to claim 3 wherein each strike delivers between 10 mJ to 150 mJ.
8. The method according to claim 3 wherein each strike delivers between 50 mJ to 100 mJ.
9. The method according to claim 2 wherein the pulse jet includes a thermoelectric ejector in the chamber.
10. The method according to claim 2 wherein the pulse jet includes a piezoelectric ejector in the chamber.

11. A method of fabricating an array of chemical moieties on a substrate, comprising:
dispensing drops from a pulse jet onto the substrate so as to form the array; and
intermittently striking the pulse jet multiple times.
12. A method according to claim 11 wherein multiple strikes are applied between the dispensing of drops by the pulse jet.
13. A method according to claim 11 wherein the chemical moieties are polynucleotides of different sequences.
14. A method according to claim 13 wherein the polynucleotides are DNA.
15. A drop deposition apparatus comprising:
a pulse jet having a chamber and an orifice through which drops are dispensed;
a striker including a strike member and actuator to drive the strike member to strike the pulse jet at least once.
16. A drop deposition apparatus according to claim 15 wherein the actuator drives the strike member to intermittently strike the pulse jet multiple times.
17. An apparatus according to claim 16 wherein the pulse jet includes a housing enclosing a chamber and having a discharge opening for drops, and wherein the housing is struck on an outside surface with the strike member.
18. An apparatus according to claim 17 wherein the housing is struck in a same direction in which drops are ejected from the pulse jet.
19. An apparatus according to claim 16, additionally comprising a controller which controls the actuator so that the pulse jet is struck at a rate of 0.2 to 10 strikes/second.
20. An apparatus according to claim 19 wherein the controller controls the actuator so that the pulse jet is struck at a rate of 1 to 5 strikes/second.

21. An apparatus according to claim 16 additionally comprising a controller which controls the actuator so that each strike delivers between 10 mJ to 150 mJ.

22. An apparatus according to claim 21 wherein each strike delivers between 50 mJ to 100 mJ.

23. An apparatus according to claim 16 wherein the pulse jet includes a thermoelectric ejector in the chamber.

24. An apparatus according to claim 16 wherein the pulse jet includes a piezoelectric ejector in the chamber.

25. An array fabrication apparatus comprising:

- (a) a pulse jet having a chamber and an orifice through which drops are dispensed;
- (b) a striker including a strike member and actuator to drive the strike member to strike the pulse at least once;

- (c) a pressure source which can apply a negative pressure to the chamber such that fluid adjacent the orifice is drawn into the chamber;

- (d) a positioning system which moves the pulse jet between a dispensing station and a loading station;

- (e) a controller which controls the pulse jet, positioning system, pressure source, and striker actuator, which controller:

- moves the pulse jet between the loading and dispensing stations;

- applies the negative pressure to the chamber when the pulse jet is at the loading station with the orifice adjacent a fluid to be loaded so as to load the fluid into the chamber;

- dispenses drops from the pulse jet when at the dispensing station, so as to form the array;

- controls the actuator so that the striker strikes the pulse jet at least once between the dispensing of drops by the pulse jet.

26. An array fabrication apparatus according to claim 25 wherein the controller controls the actuator to strike the pulse jet multiple times between the dispensing of drops by the pulse jet.